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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,391	02/02/2006	Marlene Michelle Dressman	DV/4-32722A/USN	4875

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EXAMINER	
STRZELECKA, TERESA E	
ART UNIT	PAPER NUMBER
1637	
MAIL DATE	DELIVERY MODE
03/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,391	DRESSMAN ET AL.	
	Examiner	Art Unit	
	TERESA E. STRZELECKA	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,26,43,45-47,72 and 73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-24,26,43,45-47,72 and 73* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-4, drawn to a method to predict which patient will be likely to develop edema when treated with a drug comprising the steps of: a) determining RNA expression levels in a biological sample for a plurality of the 13 predictor genes shown in Table 2; b) comparing patients gene expression profile to the mean No Edema expression profiles shown in Table 3; c) determining the similarity between the two gene expression profiles resulting from the comparison in (b); d) determining the likelihood that the patient will develop edema when treated with a drug by means of the degree of similarity determined in (c).

Group II, claim(s) 5-9, drawn to a method to predict, with high sensitivity, which patients will be more likely to develop edema when treated with a drug, such that no more than 15% of Edema cases will be misclassified as having No Edema, comprising the steps of: a) determining RNA expression levels in a biological sample for a plurality of the 13 predictor genes shown in Table 2; b) comparing patients gene expression profile to the mean No Edema expression profiles shown in Table 3; c) determining the PCC between the two gene expression profiles resulting from the comparison in (b); d) determining that the patient will be more likely to develop edema than not, when treated with a drug, if the PCC is negative and <0.78; and e) determining that the patient will be more likely not to develop edema than to develop it if the negative PCC is ≥ 0.78.

Group III, claim(s) 10-12, drawn to a method to predict which female patient will be likely to develop edema when treated with a drug, comprising the steps of: a) determining for the two copies of the IL-1.beta. gene, present in the patient, the identity of the nucleotide pairs at the polymorphic site at position -511 base pairs upstream (at position 1423 of sequence X04500) from the transcriptional start site; and b) determining that the patient will be likely to develop edema if both nucleotide pairs at this site are GC and determining that the patient will not be likely to develop edema if at least one nucleotide pair at this site is AT.

Group IV, claim(s) 13-15, drawn to a method to predict which female patient will be likely to develop edema when treated with a drug, comprising the steps of: a) determining for the two copies of the IL-1.beta. gene, present in the patient, the identity of the nucleotide pairs at the polymorphic site at position -31 base pairs upstream (at position 1903 of sequence X04500) from the transcriptional start site; and b) determining that the patient will be likely to develop edema if both

nucleotide pairs at this site are AT and determining that the patient will not be likely to develop edema if at least one nucleotide pair at this site is GC.

Group V, claim(s) 16, 18, 19, drawn to a method to predict which female patient will be likely to develop edema when treated with a drug, comprising the steps of: a) determination of the level of transcription of the IL-1.beta. gene in a biological sample; and b) determining that the patient would be likely to develop edema when treated with a drug if the level is above a threshold level.

Group VI, claim(s) 17, 46, drawn to a method to predict which female patient will be more likely to develop edema when treated with a drug, comprising the steps of: a) determination of the level of the protein expressed by the IL-1.beta. gene in a biological sample; and b) determining that the patient would be likely to develop edema when treated with a drug if the level is above a threshold level.

Group VII, claim(s) 20-24, 47, drawn to a method to predict which patient will be likely to develop edema when treated with a drug comprising the steps of: a) determining the pattern of protein expression in a biological sample for two or more of the protein products of the 13 predictor genes shown in Table 2; b) comparing the pattern of protein expression with the pattern expected for the Edema and the No Edema expression profile shown in Table 3; c) determining that if the pattern is more similar to the No Edema pattern that the patient will not be likely to develop edema when treated with a drug; and d) determining that if the pattern is more similar to the Edema pattern that the patient will be likely to develop edema when treated with a drug.

Group VIII, claim(s) 26, drawn to a method to design clinical trials for the testing of drugs comprising the steps of: a) determining by the use of either expression profiling or genotyping methods the likelihood that a particular patient will develop edema when exposed to the test drug; and b) assigning that patient to the appropriate classification in the clinical trial based on the results of the determination in (a).

Group IX, claim(s) 43, drawn to a kit for predicting which patient will be likely to develop edema when treated with a drug comprising: (a) a means for determining the pattern of protein expression corresponding to the two or more of the 13 predictor genes shown in Table 2; (b) a container suitable for containing the means and the biological sample of the patient comprising the proteins, wherein the means can form complexes with the proteins; (c) a means to detect the complexes of (b); and (d) instructions for use and interpretation of the kit results.

Group X, claim(s) 45, drawn to a kit for predicting which patient will be likely to develop edema when treated with a drug comprising: (a) a means for determining the level of the protein expressed by the IL-1.beta. gene; (b) a container suitable for containing the means and the biological sample of the patient comprising the protein, wherein the means can form complexes with the protein; (c) a means to detect the complexes of (b); and (d) instructions for use and interpretation of the kit results.

Group XI, claim(s) 72, drawn to a kit for determining the identity of the nucleotide pair at the -511 position of the IL-1.beta. gene (at position 1423 of sequence X04500) from the transcriptional start site for the two copies of the IL-1.beta. gene present in the patient; comprising: a) a container

comprising at least one reagent specific for detecting the nature of the nucleotide pair at the at the -511 position of the IL-1.beta. gene (at position 1423 of sequence X04500) from the transcriptional start site for the two copies of the IL-1.beta. gene present in the patient; and b) instructions for interpreting the results based on the nature of the said nucleotide pair.

Group XII, claim(s) 73, drawn to a kit for determining the identity of the nucleotide pair at the polymorphic site at position -31 base pairs upstream (at position 1903 of sequence X04500) from the transcriptional start site; comprising: a) a container comprising at least one reagent specific for detecting the nature of the nucleotide pairs at the polymorphic site at position -31 base pairs upstream (at position 1903 of sequence X04500) from the transcriptional start site; and b) instructions for interpreting the results based on the nature of the said nucleotide pair.

2. The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Allison et al. (U.S. Patent No. 4,935,343) teach a kit comprising an antibody to IL-1β (= means for determining the level of the protein expressed by the IL-1β gene) and container suitable for contacting the antibody with the biological sample (col. 2, lines 35-37; col. 4, lines 21-46; col. 5, lines 1-21; col. 6, lines 56-68; col. 7, lines 1-11), therefore the claims do not present a contribution over prior art and therefore do not have a unifying special technical feature.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Different numbers of predictor genes from Table 2 (Groups I, II, VII and IX).

Applicant is required, in reply to this action, to elect a single species, i.e., the number of predictor genes from Table 2, to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of

an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The following claim(s) are generic: 1, 5, 20, 43.

4. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: each of the combinations of predictor genes corresponds to a different outcome of the evaluation.

5. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention

must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA E. STRZELECKA whose telephone number is (571)272-0789. The examiner can normally be reached on M-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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March 14, 2008